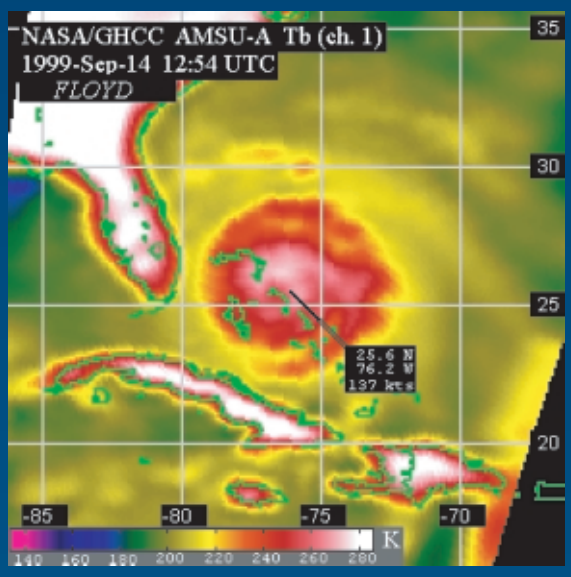
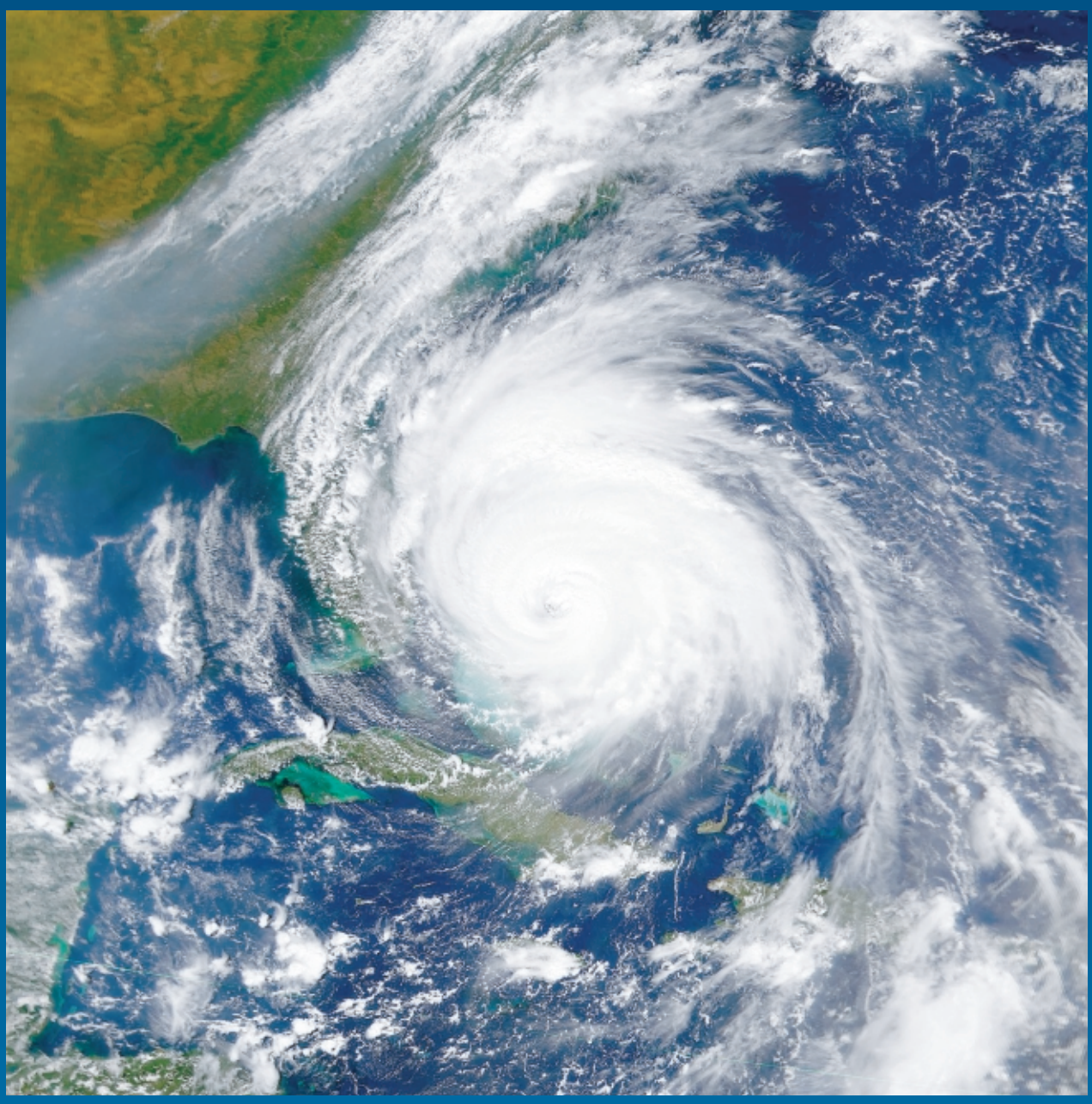
Hurricane Floyd – September 14, 1999

Global Hydrology Resource Center (GHRC) and Goddard Space Flight Center (GSFC)



Advanced Microwave Sounding Unit–A (AMSU–A) Brightness Temperatures Channel 1 (GHRC)

Channel 1 measures brightness temperatures that correspond to microwave emissions originating at the Earth's surface. Landmasses are warmer than the water and easy to detect. The hurricane also is much warmer than the underlying ocean. Its distinctive circular pattern and the rain bands encircling the eye are discernible.



This true–color image acquired by the Sea–viewing Wide Field–of–view Sensor (SeaWiFS) shows Hurricane Floyd during passage over Grand Bahama Island. To the southwest of the hurricane's eye, blue–white waters on Grand Bahama Bank (visible through the outer cloud band) indicate sediment suspension. (GSFC)

AMSU–A Brightness Temperatures Channel 8 (GHRC)

Channel 8 measures brightness temperatures that correspond to emissions from the atmosphere at about 45,000 feet above sea level. Variations of surface temperatures are not indicated at this height. The hurricane, which is a heat pump, has carried enormous energy (heat) to a high altitude and released it.